FEDERAL COMMUNICATIONS COMMISSION

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PUBLIC SAFETY NATIONAL COORDINATION COMMITTEE

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INTEROPERABILITY SUBCOMMITTEE MEETING

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THURSDAY,

NOVEMBER 15, 2001

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The meeting was held at 12:43 p.m. in Salon A and B of the Brooklyn Marriott Hotel, 333 Adams Street, Brooklyn, NY, Michael Wilhelm, Chair, presiding.

SUBCOMMITTEE MEMBERS PRESENT:

MICHAEL WILHELM - CHAIR
JOHN POWELL
GLEN NASH
ROBERT F.SCHLIEMAN
TOM TOLMAN
TED DEMPSEY

ALSO PRESENT:

JOHN OBLAK
WAYNE LELAND
TIM GOODALL
DAVID BYRUM

ALSO PRESENT: (Cont.)

CLARK PALMER
DAVID EIERMAN
RON MAYWORM
CARLTON WELLS
RICK KEMPER
BOB FENICHEL
DAVID PICKEREL
PAUL MAY
DAVE FUNK
ALI SHAHANI
FRED GRIFFIN

A-G-E-N-D-A

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Interoperability Subcommittee

P-R-O-C-E-E-D-I-N-G-S

(12:43 p.m.)

MR. POWELL: We will reconvene the joint meeting and finish up this afternoon with the interoperability subcommittee. There should be an agenda, and one handout attached to that agenda. Copies are in the back of the room beyond what I passed out to people.

I'm going to, as usual, ask Bob Schlieman to serve as secretary. Michael indicated he has no opening comments. Again, as usual, anyone that is interested in joining any of the working groups, that is not already involved, please see me or see Bob, and we will add your name to the list of the working groups, and make sure that it is added on the list serve.

There is an agenda. I will note that I messed up on the date on the agenda, it should be the 15th. The document number appears to be correct. Do I have a motion to accept the agenda? Rod Mayworm. Second?

MR. WELLS: I will second.

MR. POWELL: Carlton, thank you.

The minutes for the meeting in Washington, actually that should be for the meeting in St. Louis, and I will make that correction, are locked in my computer, I cannot get them out. The computer glitched on the airplane last night, so I will circulate those on the list serve, and we will have to take them up at the next meeting.

I do have an updated document list that is about four pages long, now. I did not copy that. I will also circulate that on the list serve. With regards to working group activities, Bob, anything on report drafting for the next interim report, that is scheduled for --

CHAIR WILHELM: There is no schedule.

MR. POWELL: No schedule for it at this point.

MR. SCHLIEMAN: Still in process.

MR. SCHLIEMAN: In process for this subcommittee. Operational requirements, Kyle isn't here. However, there were, earlier, some PSWN representatives here who are working with Kyle on operational requirements, and I don't see them back in the room yet, so we will take that out of order when they return.

Carlton, you had some issues you wanted to address. I will turn it over to you as chair of working group 3.

MR. WELLS: This will be really short and superficial. What you should have seen already, via the listserve, are two documents. One is from a previous distribution that I put out again.

But they are really intended for a preliminary review as working drafts. I have nothing prepared today to present, and really open up for any lengthy discussion. But what you will see, in those two documents, on one of them is identification of various issues brought up in the fourth report and order.

Up to this point we have been discussing narrow band, primarily. And when you read the fourth report and order, your focus may be narrow band. But when you look at some of those issues, they can be applied to wide band as well, and I didn't see the fourth report and order that said specifically narrow band.

So I opened it up to apply them to wide band and start a working draft of which ones may carry over into wide band, rather than reinventing the wheel, we just go back and reference the wheel that exists already.

That is merely a reference document, not something, I think, to really consider for passing as recommendations, but merely work from, in developing recommendations in wide band.

The second document that was distributed is an initial attempt to start developing some areas in wide band as far as labeling wide band channels, and other actions that we've already done in narrow band, at this point.

Again, not to reinvent the wheel, but to keep the wheel turning for consistency on how we have labeled, or addressed narrow band channels that we addressed similarly in wide band, so we don't have a different story to tell, it is the same story, a different chapter, wide band.

So if you haven't responded on the listserve to that, don't feel bad, there is still time, I think. In the future, when those become more realistic, and less what I would tend to call them right now, glass house. They are primarily my ideas put on paper.

And when it looks like discussion that is going on, that is me being schizophrenic talking to myself, and carrying out a dialogue to come up with a conclusion that may make sense.

But, please, do put your input into it, so that future work on those can arrive at a consensus at a future meeting.

MR. POWELL: Thank you, Carlton. I also have, and I believe it was circulated on the listserve, although I'm not sure, an updated regional convener and chair list. Again, I only printed out one copy of that. If anyone is interested in that list, how many are on it here?

There are 31 regions listed on this list. I received this from Don on the 13th. I will make sure that it got on the listserve. And if you have any questions regarding your region, or adjacent regions, and want to see the list, I will have a copy of it up here.

Anyone from PSWN come back into the room? It doesn't look like it. Dave Buchanan distributed, back on June 20th, a document to begin discussion on common addressing method for the low speed data interoperability channels.

And I want to -- that document is attached to the agenda. Hopefully people have had an opportunity to read that over, and at this point, since Dave is not here, I would open discussion, if anyone has any comments on that document.

What he is proposing is that we look at an internet protocol based identification scheme. And he has identified the internet class B addressing, which allows a range of subnets, as well as hosts. In fact, up to over 16,000 hosts in each of the two subnets.

Let's put it this way, there is a lot of different options that are possible. The standard that we've adopted does support the capability to handle IP addressing, and protocols, using a gateway.

Also fixed infrastructure will support it. He mentions, in the second to the last paragraph, that security is a concern, and that we do need to maintain a data base of domain names. And the cross-referenced internal serial numbers that would be associated or validated against each of the domain names.

Carlton?

MR. WELLS: One thing that jumps out in the third paragraph, who would be the sponsoring agency to manage this.

MR. POWELL: He brings that up in the last paragraph, that we do need a sponsoring organization, or an agency, to apply for the domain name, and IP class B address on a nationwide basis.

What he is proposing is that each state would then be assigned a subnet address, or addresses to be used at incidents, with the states managing those IDs. I assume it would be an agency within each state managing those IDs.

Those of you coming into the room, now, there are some handouts on the back table, if you didn't get one already.

MR. WELLS: For instance, each state who establishes the administrator for the interoperability channel, maybe by default consider that as a first option.

MR. POWELL: Yes, that is something that we needed to address, and that is probably the logical place, would be either the state interoperability executive committee, or the regional planning committee, if that committee doesn't exist in the state, following along where the FCC rules are for those committees.

I'm assuming, if we wanted to get a dotgov type of address, that we would need a government agency that is statuted to get one of those addresses, to be able to do that. I don't know if there is anyone in the room that wants to volunteer for that, but that certainly is something that we need to discuss, and probably should get going.

There have been, in other forums, similar discussions on this addressing for use of these channels within the project 25 protocol. In fact, project 25 itself, has had significant discussion on this topic.

John, would you care to elaborate? I have not been party to all of those discussions. I know that within TIA there has been a lot of talk about how we can make this work.

I think Dave brings up a very valid concept, here. At this time let's -- we will continue this to the agenda for the next meeting, and ask that people, through the listserve, get their comments back.

Hopefully between now and then we can identify a host organization that would, at least, acquire the initial domain name that we could then use to start breaking these out from. We will pound on Michael. That is kind of the logical one to me.

Any further comments on this item?

(No response.)

MR. POWELL: I don't see anyone from PSWN back in the room, we will have to come back to that.

From this morning's meeting we agreed, this afternoon, that we would discuss an encryption algorithm and standard recommendations. To begin that we have the benefit of having someone with us, today, who used to work for National Communication Systems, retired from there, but has a significant amount of background in the encryption area, and I asked him, after we adjourned for lunch, if he would care to give us some history on DES, and where MCS, and the other federal standards organizations were moving recently, as well as what we could expect the lifetime of some of these standards to be.

So, Bob Fenichel, if you want to come up and introduce yourself, tell us what you are doing now, and give us some background on encryption.

MR. FENICHEL: I'm Bob Fenichel from the National Communications system, and my retirement is four and a half months away. I have been talking about it for a while, but --

MR. POWELL: Yours and a whole bunch of us in the room, I think, Bob.

MR. FENICHEL: Not here yet, but close.

I've been involved in standards for about 25 years, and I was involved in the early days of the DES standard. And I can say that the DES standard is about 25 years old, probably.

The development of the DES algorithm probably took place between 25 and 30 years ago. So it has been around a while, and it has lasted a while. And one of the things that was mentioned this morning was that the DES algorithm was broken.

And I think from a cryptographic point of view, that is not correct, in that with any encryption algorithm, if you have matching plain text, and cipher text, and you try every possible combination of key, eventually you will find the right one.

And that is true with all algorithm. And, to the best of my knowledge the DES algorithm has not been broken, in that there has been no shortcut solution found. However, it, as was mentioned, is not recommended for new implementations, because with tens of thousands of computers it is possible to, and I don't know if it is days, or weeks, or months, or whatever it is now, try all the keys and find the right one.

I think when DES was developed, 25 years ago, the life of it was never anticipated to be this long. It was only intended to be 10, or 15 years or so. So it has had a useful life.

As far as Triple DES versus the advanced encryption standard, I think really either one would be suitable. I think the advantage, off-hand, for the AES, is that it is much less computationally complex. That was a major consideration 25 years ago. Perhaps with today's technology that really doesn't make too much difference these days.

And the advantage of triple DES, one is the backward compatibility to DES that was mentioned earlier. And the other is that, I believe, there is an ANSI standard for the triple DES that has been in existence in the banking community for a number of years now. So you could say there is a triple DES ANSI standard.

And I would just say that I think both triple DES and AES will be around for quite a while. And I think the decision, personally, to not recommend the use of the DES, was a somewhat conservative decision on the part of NES.

I think that people on the security business tend to be very conservative. But if you did change keys periodically I think that it would be usable for a lot of applications, even though the official disposition is that it is not, you know, really recommended. They try to encourage the use of triple DES or AES instead.

And those are, really, the thoughts that I had to give to the group. Thank you.

MR. POWELL: Thank you, Bob. At this point what I would like to do is, if I have to single people out, hopefully I won't have to do that. We have at least one major federal agency in the room, sitting in the back there.

If we can get, perhaps, some comments on your feeling? Because it would be, certainly the Bureau is going to be one of the -- in the law enforcement arena one of the, if not the major federal agency that we would be working with from an interoperability standpoint.

So if I could get some comments on where you think you might be going, or where we should be going, I would solicit those. You don't have to talk if you don't want to, but hopefully we can get something.

Otherwise we can just open the floor up for discussion. I'm hoping that we can arrive at a recommendation to go to the technology subcommittee today. The mike is open.

MR. ASHLEY: Dan Ashley, FBI, representing FLEWUG.

Not speaking for the Bureau, but speaking from my knowledge of what the direction at this point is, the federal government will be going to AES. They will be stepping over out of the DES platform.

There is still some discussion whether triple DES will be used as an interim. But as soon as

AES is fielded the federal government will transition to AES.

My personal recommendation on that would be, since it doesn't appear that the equipment is going to be fielded for a little while, yet, in the 700 MHz band, my recommendation would be to go with the AES, plan for that platform, and go into the future with the most current encryption available.

I'm not speaking from the Bureau point of view, because I'm not in a position to do that. But I know that the mandate is to go to AES as soon as it is fielded.

MR. POWELL: And, John, we are anticipating that fielding being mid-year of the coming year, is that correct?

MR. OBLAK: (Not miked.)

MR. POWELL: Mid-calendar year 2002, as far as the standards development at this point. Bob Fenichel, do you have any comment on what is NCS is looking at on having that out?

MR. FENICHEL: I don't know.

MR. POWELL: Any other comments? Manufacturers, if we were to, at this point, recommend that the standard, which we did find -- Michael, where is that -- it actually is in the rules as DES.

90.553. There is an incorrect reference somewhere else in there.

The reference in that section is not complete. But, nonetheless, the intent is there to reference single DES, just DES, as the standard.

So for the manufacturers that are here, if we were to recommend to the Steering Committee, through the Technology Subcommittee, that they petition the Commission to change that to AES, is that going to be a problem? Paul, John, Motorola representatives, there are several here, others?

And also if you would comment on your feeling on gateways with regards to backward compatibility, or cross-banding to other users.

MR. ITTNER: Al Ittner, from Motorola. The question of encryption is an option. So if the question is, can we field the equipment in 700 without knowing the AES/DES decision, the answer is yes. There would be clear radios without any encryption in them.

We would wait, obviously, to see what the decision is between AES and DES before we start designing and developing radios with one of those encryption standards in it. And then it would be the -- I think I don't have a set time in terms of how long after the decision is made.

Generally we have used a 9 month to 18 month kind of time frame, but I don't know if that applies, I'm not in engineering enough to be able to tell you whether that is the development cycle for that standard.

So the answer is we would be able to field radios without encryption in them, and are planning to do so. But certainly have to wait for your decision in terms of AES or DES.

MR. POWELL: Thank you.

MR. OBLAK: John Oblak from E. F. Johnson.

Currently all of our product that is project 25 compatible is -- has been fielded with DES encryption to the project 25 standards.

We currently don't have an AES implementation. However, we don't feel that there is a technical reason why we couldn't, we just have not fielded anything other than DES at the moment.

I would say if we had a preference, I do believe in the theory of the common denominator, baseline technology. I think that is where we've gone in all of the decisions that have been made in terms of interoperability that we chose a standard that was baseline.

And, certainly, we do have an install base in other bands that include a number of implementations with DES. And, therefore, for complete interoperability I would say that the baseline of technology being the DES standard would be the most likely candidate, in our preference, for standardization.

MR. POWELL: Thank you, John. Paul, comments?

MR. MAY: I guess I'm just going to reiterate what I think I said earlier, which is that we would prefer to see the AES as the standard, start fielding equipment.

We too may end up having to ship units that initially do not have an encryption capability for the interoperability channels. From my discussions with our folks I don't believe that there is anything that precludes us from doing that kind of upgrade in the field as a software type feature.

I don't think there is a hardware difference that would significantly impact the design of the radios, that sort of thing.

MR. POWELL: How about dual algorithm radios?

MR. MAY: As far as I'm concerned it is

all a question of code space in the radio. You know, typically radios will ship with one to two megacodes base, and how we partition and use it up is pretty much a commercial decision.

Generally you don't operate both of them at the same time, so it is a fact of paging one in and out. Like I said, I think that is in the realm of possibilities.

MR. POWELL: Any other manufacturers here that would like to speak?

(No response.)

MR. POWELL: Okay. Users? There must be some opinions out here.

MR. ASHLEY: Don Ashley, again. This time I'm going to put my PSWN hat on and I'm inclined to agree with John Oblak, that the lowest common denominator is really the important point here.

And I would just suggest that the lowest common denominator for interoperability is still clear text. It is fine that everybody may have encryption, but even when you bring groups together who do not normally communicate together, the lowest common denominator, even if they are encrypted, is to bring them back to a clear text condition, bring them to a switch, and then feed them back out on another radio system.

And that is how most or many organizations are establishing interoperability. So the decision of whether, what the encryption is, may not be as important at this point as it seems to be, because the lowest common denominator is still clear text audio.

MR. POWELL: Except that we are talking about encryption here. So if we are talking about the lowest common denominator for encryption. Now, if we go back to what Bob Fenichel said, earlier, that a triple DES standard exists, and we know that triple DES is backward compatible to DES by simply loading the same key three times, if we were going to say DES was the lowest common denominator, would we not be better off to say triple DES was the lowest common denominator, because we can make it backward compatible to DES, and it offers that additional security?

I don't hear anybody saying no. Don, for the federal agencies, as they migrate to AES, do you anticipate them keeping radios backward compatible to the DES standard?   Is that going to be a problem, say second generation radio from now, as the agencies all convert to AES, that ten years out we might not have the capability?

MR. ASHLEY: That I can't answer, because I'm not sure how much funding will be applied to upgrading radio systems. As you know the federal mandate to upgrade to narrow band is ongoing at this time.

In that process of upgrading radio systems and going narrow band they probably will also, or at least the major law enforcement agencies will foot the bill to go to AES as quick as possible. But how quickly that will happen, I don't know. I don't think anybody knows.

MR. POWELL: Paul?

MR. MAY: I guess the one comment I would make on triple DES is, to my knowledge, there is no commercial mandate to go out and develop that technology. So other than the deliberations in this committee, you look at the federal market, if they move to EAS then obviously, from a manufacturing perspective is a lot of clout to develop the EAS capability, as opposed to triple DES.

I'm unaware of too many customers that have come up to us and requested that capability.

MR. POWELL: I'll throw that back out on the floor. Is that the case? Certainly we don't want to pick out something that makes 700 a niche market for this product, where it wouldn't necessarily be developed, perhaps, in other bands.

MR. WELLS: If I heard him correctly, should the Federal Government take on the AES, and the manufacturers build AES equipment, and the NCC recommends DES3, there may not be DES3 equipment to comply with the NCC recommendation.

MR. POWELL: Or it might be real expensive.

MR. WELLS: Yes, prototype prices.

MR. POWELL: Right. So what is the recommendation of the group? Nobody wants to speak up.

MR. WELLS: Well, if we stayed with the DES right now, again, if the manufacturers are building AES in the future, then are we still on an island, staying to the existing FCC rule on DES right now?

It is like we are being forced into a de facto standard over time. Because if we stand on DES today, tomorrow would DES still be manufactured, or will it go away to the AES mass market?

MR. POWELL: There is a significant imbedded base of DES out there. But I believe that most of that significant base in the Federal

Government, which over time will convert. Certainly there is some at state and local level.

MR. WELLS: It is like we are the tail trying to wag the dog here.

MR. POWELL: You just walked into the room, it is your turn.

Well, certainly in other technologies we always propose going with state of the art if there is a benchmark. And unlike waiting to pick the best computer where we never make that choice, there is a benchmark on the horizon.

And equipment is in development, but generally not yet fielded. Perhaps in type acceptance at this point, for the band. Potentially some delays in fielding. Encrypted radios, if we were to wait, or recommend that we wait for AES, my personal feeling is that it is probably worth that wait.

Certainly nothing prohibits an agency from asking for dual mode radios. We are starting with one and asking that the equipment be flash upgradable to take the other one later on.

Well, actually, Bob Schlieman made the comment, assuming it has the code space. But from what Bob said, if it as flash upgraded AES with AES being a much less complex algorithm to implement, I think one could assume that if you had DES implemented you should be able to put AES in the code space. Should?

What is the will of the group? Somebody needs to speak up.

MR. WELLS: My gut feeling is that we look to AES, not discount it but look toward it, realizing we've got a DES in rule right now. But looking toward AES, will it stop us from implementing an encryption standard that is already adopted in anticipation of AES to come, but again, it is difficult for us to adopt an AES standard that hasn't been developed yet.

MR. POWELL: That is true.

MR. WELLS: Catch 22 right now. And when AES comes about will the NCC be in existence to look at it?

MR. POWELL: Certainly if it meets the date that people have been throwing around the NCC will be here. I think the key issue at this point is Glen Nash brought up this morning, we need to put the manufacturers on notice that we are looking at proposing that that encryption standard be changed if indeed that is what we are going to propose. In all fairness I think we need to do that.

And if that is the consensus of the group here, then I think what we should do is recommend to the technology subcommittee that the bring forward to the Steering Committee, tomorrow, a recommendation that at least a letter go to the Commission, and to the manufacturers, suggesting that as soon as the AES standard is developed that we change, request the Commission to change the rules to mandate that standard on the interoperability channels.

MR. SCHLIEMAN: The whole encryption issue is a multi-standard issue with respect to the ANSI 102 series of radios. The standard that is currently in the FCC rule 90.553 is the DES definition.

I'm just looking to pull it up again. It is project 25 DES encryption protocol. There are a whole set of standards that define encryption, and that is sort of like an overview document.

The one I mentioned earlier in the technology subcommittee meeting, AAAD is the definition of the -- just a moment, I will bring that up. I almost think that is a replacement for AAAA. IT opens up by saying that this standard was developed with inputs -- the standard expands the material given in AAAA. However, this standard incorporates, and is completely compatible with that standard.

Essentially AAAD will give you the three choices of algorithm. And it will be done through the NX mechanism, so that the standard will not have to change as a standard.

MR. OBLAK: That is correct. The block encryption standard document really is a replacement for the DES document, and is a more generic document that describes the three encryption algorithms that were mentioned, plus potential others.

So it is a more generic document that replaces the DES document.

MR. SCHLIEMAN: Since it is not completed balloting yet, it would be premature to try to act on that in the NCC. Having said that, if it were not in that state, if it was a completed ANSI standard, I would recommend that it be used to replace the standard that is expressed in 90.553, and that we then discuss the algorithm that will be used as the --

And I think that could be expressed, maybe, in terms of some variables that would allow AES to be used when it becomes available. In the meanwhile DES compatible algorithms would be acceptable as the lowest common denominator.

And the issue of NXC besides specifying the AES algorithm also specifies that in a project 25 radio implementation, the radio, if it is implementing

AES, must also implement a DES compatible algorithm.

So it could be either triple DES, or DES itself, as defined in annex B and A respectively. It would seem that we could, perhaps, craft something around that would still allow us to have accurate compatibility to imbedded base equipment, not necessarily imbedded in this band, but it could be imbedded in adjacent bands, like 800.

Which, in fact, could be actually treated as all one band, 700-800, and other bands, of course.

MR. POWELL: The issue is that we need to pick one standard. And if it happens to include that backward compatibility, that is a plus. Otherwise we may be looking at gateways, and bringing step back to clear text re-encrypting it, pass it on to other systems, whatever we have to do.

That, of course, brings up other problems in doing that.

MR. SCHLIEMAN: Could we perhaps, because this is not a completed standard at this point, I'm referring to AA/AD, could we perhaps make a statement of intent that would be passed on to the Commission to guide them in what needs to be done, or what will need to be done?

And then -- because they have an error to correct in that 90.553, anyway. So they are going to do something. And maybe they want to wait until we finish with this thing, as soon as it becomes available, to finish with it.

MR. POWELL: That was my suggestion for the letter, is to alert them that we were looking at a change. And I think more importantly than the Commission, though, is to alert the manufacturers that we are potentially looking at a change.

And, again, back to the group. No comments from anyone? I know from discussions this morning with Glen, and a couple of other people that are not here right now, that they all felt that we should be looking towards AES as the standard here.

MR. SCHLIEMAN: And, John, I thought I saw a couple of nods in the audience when we were heading in that direction. So I'm hearing no objections.

MR. POWELL: No objections. Well, here is what I would propose that we take to the technology subcommittee, then. Is a recommendation that they move towards AES. And at this point send to the Steering Committee a letter indicating that, and request that they forward that to the Commission, as well as to the manufacturers.

That once the AES standard is complete,

and included within the ANSI documents, that that become the standard. It will require a rule change, but that become the standard for this band.

Now, do we have any objections to that?

MR. SCHLIEMAN: Could we expand on that a little bit?

MR. POWELL: Sure.

MR. SCHLIEMAN: Could we word it so that we express our intention to change the recommendation when it becomes available as an ANSI standard, to go to ANSI TIA/EIA 102.AAAD, using the NXC AES algorithm?

MR. POWELL: Sure. Does that meet with the consensus of the group? Okay, I see heads nodding, not shaking.

Okay, that is what we will do, then. We will recommend to the technology subcommittee that they proceed along that line. And at least hopefully tomorrow Mike will have time to get a letter to the NCC Chair indicating that. Find some time in the agenda to get a letter up so that people are on notice to the fact that equipment is coming down the line fast, now.

Any further discussion on this item?

(No response.)

MR. POWELL: Since I know there are some

PSWN folks in the room now, going back to working group 2, operational requirements, do we have anything further along the incident command system?

A lot of information was passed out on that in the past. And, actually, there have been a couple of other documents that I received over the past couple of months, as kind of reference information.

Nothing new on that? I will see if we can -- I think those came out on the listserve, I will make sure that -- there is one in particular that gets circulated. And I don't remember the source for that. But it was a well known organization.

And we will go ahead and circulate that so that we can -- I would like, at the next meeting, to be able to make some kind of final recommendation to the Steering Committee. We are at the point that we need to do that, on the incident command system.

Certainly I think if you look at recent events, where it was used very successfully, and I believe we will have some discussion on that tomorrow from Steve Souder on his presentation on the response to the Pentagon incident, multi-agency response.

This is signed by DAve. This was for the November 16th meeting?

CHAIR WILHELM: That is on the agenda.

MR. POWELL: Okay. So this is going to come up tomorrow as our recommendation. Great. Yes, this is the expansion upon what we did from the last meeting. Good.

So everyone should have that because it was on the listserve?

MR. WELLS: Yes.

MR. POWELL: Okay. We will move that forward, then. And I should get together with you, Dave, because we've got a couple of items to go to them tomorrow. So put that all together.

Will you be doing that, or --

MR. PICKERAL: David Pickeral, Booz, Allen, Hamilton PSWN program support. Bob Lee who is the PSWN program manager for Justice, who is not here yet, will be discussing that document and that issue tomorrow.

MR. POWELL: When do you expect him in?

MR. PICKERAL: Later today. We are not aware, he is coming up from Washington, probably as we speak.

MR. POWELL: I should probably talk to him before so we can get that coordinated.

MR. WELLS: Also, John, if I may add? For tomorrow's discussion, this document refers to certain ICS forms in case questions come up regarding those forms.

Could those be ready for presentation if a question comes up, to show? For myself, I'm not familiar with form 16, 217, 204, and since they are incorporated in this document I would feel good being able to actually see those forms to know that this is all-encompassing.

MR. POWELL: Or at least have a description of what they are.

MR. WELLS: Yes.

MR. POWELL: Certainly I think a number of us in the room are familiar with the 204. Dave, can you make sure that there is at least a verbal description available on what those forms are that are referenced in there?

MR. PICKERAL: Yes, we can do that.

MR. POWELL: Just shout loud, the mike will pick it up. Okay, thank you.

Do we have any other business for the interoperability subcommittee? I will get together with -- Michael?

CHAIR WILHELM: I'm trying to take advantage of the fact that we have a somewhat captive audience of manufacturers here.

What, if anything, does this committee or the Commission have to provide in order for you to proceed to the final design phase of the 700 MHz radios?

MR. LELAND: Wayne Leland, Motorola.

I think the overriding issue for manufacturers, at least for Motorola, is getting access to spectrum. If there is no market because there is no spectrum, because the TV hasn't been cleared, the manufacturers are going to be reluctant to invest a lot of development money to bring out product until that is there.

Especially in these times when everybody is cutting back significantly. So I think it is very key that -- and I know it is on the agenda for NCC tomorrow, on a panel, that we work towards whatever we can to get the spectrum cleared.

New York, you know, there is no 700 MHz spectrum available in the city of New York, anyway. I see Bob squirming up there. The west coast, and major metropolitan areas, which we know is where the needs may be highest, given today's situations, just don't have access to it.

So I think that is a key issue.

MR. POWELL: John?

MR. OBLAK: I would say, again, I agree with Wayne. From a technical standpoint I don't believe that there is anything that we are lacking from the standpoint of direction, or rulemaking.

Obviously the issue of AES versus DES will, you know, add an unknown into the equation. But from the standpoint of what technology decisions need to be made, I don't think that there is anything that we are lacking at the moment.

MR. MAY: I guess I have to echo the sentiments of both Wayne and John in terms of technical standards. One thing you could do is throw a lot of money at state and local agencies, and those people who have spectrum, and that would help.

MR. POWELL: Other manufacturers in the room applaud that comment, I see. That is probably some users. Anything else, Michael? Ron Mayworm.

MR. MAYWORM: Ron Mayworm from the city of College Station, Texas. As the Chairman of the Region 49 700 MHz planning committee, I was advised by the representative of the state of Texas, Department of public safety, that the state of Texas is intending to notify the FCC that they will accept the responsibility for the management of the interoperability channels throughout the state of Texas, and across the six regions that comprise the state of Texas.

My first reaction was, this is good news. They are concerned that the administration of the interoperability channels be uniform throughout the state. But as I got to thinking a little further, and started looking through the rules as they sit, at the moment, there is very little incumbent upon the state in guiding them as to how they should be handling the administration of these interoperability channels.

In the rules, currently, it only requires that modulation on the interoperability channels be project 25 phase 1; that there be two specific interoperability calling channels, and that no encryption be allowed on those; that there be a single encryption method on the other interoperability channels; and that there is a formula, if you wish, for allowing trunking on certain number of the interoperability channels.

Beyond that they are free to play in any way they wish, unlike the requirements of a plan from a regional planning committee being submitted to the FCC for review, in which there could be uniformity required by the FCC, there is no requirement upon the state entities to submit anything, to anybody, as how the interoperability channels will be used within their states.

And certainly nothing that would require any uniformity at the nation-wide level, which is what we were all sent here to do, was to develop a nation-wide interoperability plan.

I believe we may have abdicated our responsibility by giving this much rein to the states at this point in time. And I urge that, perhaps, we take a good look at the current situation, and perhaps urge the full committee, and the FCC to perhaps put some teeth in how the states are allowed to manage the interoperability channels.

MR. SCHLIEMAN: I agree partially with what you said. And I would note that in FCC 0110, the fourth report and order in 9686, there are responsibilities. But the point that you made, I think very well, is the fact that even in that document there are really not standards for what we've been trying to establish as standards in the interoperability subcommittee.

And I think that is the really key point there, that this needs to be encapsulated in some FCC document that would serve, much as it did with 86112 for 800 MHz. It is referenced throughout the rules, but they don't put all the details in the rules, they just refer to that.

And I think we need a similar situation here to address the point that you made.

MR. POWELL: I don't recall that there is even a requirement in there that they coordinate with adjacent states. So in theory the first one in could grab all the channels and use them all around the border, and all the adjacent states, which in some areas are many, on the interoperability channels --

True, they are non-exclusive. But nonetheless having a coordinated use is going to make them significantly more effective. And that recommendation, logically, would be there some place, and I know it is in the implementation documents.

But not any place that is binding, only in recommendations. That is a good point, Ron. Other comments from anyone else?

Dick who is going to take over for your subcommittee at this point, since we are ready to recess for a little while. Ted was here earlier. It is 1:35. Let's take about a 15 minute -- we will adjourn this meeting and turn the podium over to Ted at 2 o'clock.

(Whereupon, the above-entitled matter went off the record at 1:35 p.m.)